

S
614.71
H2m
Nov, 1977

MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

Monthly Activities Report
of the Air Quality Bureau

November, 1977



DEC 28 1977

MONTANA STATE LIBRARY
990 E Lyndale Ave.
Helena, Montana 59601

1. Highlights:

The Anaconda Company has agreed to pay a penalty of \$73,000 for violating the 1974 stipulation.

Preliminary Environmental Review issued on Harding's Redi-Mix plant at Pablo, Montana.

Initiated data acquisition for MAPS real-time emission inventory. Industries in Missoula will begin submitting data in December

2. Ambient Air Quality Network:

a. Standards Exceeded

SO₂ violations of ambient air quality standards from company stations near Anaconda smelter were:

State 1-hour	54
State 24-hour	8
Federal 24-hour	6
Federal 3-hour	4

SO ₂	Highest 1-hour	Highest 3-hour	Highest 24-hour
Mill Creek	1.72	1.70	0.58
Hiway Junction	72.0	72.0	0.70
C-Hill	1.85	0.92	0.04
Post Office	0.52	0.45	0.13
CO - Alpine	10.0	5.2	2.5

O₃ - Alpine (moved to Missoula)

	State 1-hour	State 24-hour	Fed. 3-hour	Fed. 24-hour
Microwave	6	0	0	0
East Station	19	0	0	0

3-hour Federal SO₂ violations

<u>Date</u>	<u>Time</u>	<u>Place</u>	<u>Reading</u>
10/6/77	0000-0300	Kennedy Park	0.54 ppm
10/11/77	1900-2200	Kennedy Park	0.82 ppm
10/16/77	0000-0300	Kennedy Park	0.52 ppm
10/21/77	2000-2300	Kennedy Park	0.51 ppm
10/22/77	2100-2400	Kennedy Park	0.66 ppm

24-hour federal SO₂ violations

<u>Date</u>	<u>Time</u>	<u>Place</u>	<u>Reading</u>
10/6/77		Kennedy Park	0.16 ppm
10/21/77		Kennedy Park	0.16 ppm
10/22/77		Kennedy Park	0.17 ppm
10/27/77		Kennedy Park	0.15 ppm
10/29/77		Kennedy Park	0.16 ppm

3. Permits and Tax Credits:

a. Construction Permits - Applied For

Cenex, So. of Laurel, additional asphalt road oil loading heater
Peter Kiewit Sons, Mineral Co., portable hot mix asphalt plant
Wickens Brothers, Hill Co., hot mix asphalt plant
Wickens Brothers, Valley Co., portable gravel crushing plant
Wickens Brothers, Valley Co., portable gravel crushing plant
Wickens Brothers, Valley Co., portable gravel crushing plant
Eastmont Forest Products, Ashland, wood-waste fired furnace
Cenex, So. of Laurel, No. 3 boiler stack modification
Cenex, So. of Laurel, No. 4 boiler stack modification
Cenex, So. of Laurel, No. 5 boiler stack modification
Cenex, So. of Laurel, crude preheater stack modification
Cenex, So. of Laurel, FCC unit feed preheater stack modification
Cenex, So. of Laurel, FCC CO boiler stack modification
Cenex, So. of Laurel, crude main heater air preheat system
Cenex, So. of Laurel, FCC electric gas compressors
Cenex, So. of Laurel, replace refinery flare
Edward Boehm, Livingston, incinerator
Weatherford Funeral Home, Kalispell, incinerator

Approved:

Petrolane/Perry Gas, East of Sidney, gas compressor, regeneration unit
Arness-Anderson Corp., Ashland, wigwam wood waste burner
Zook Brothers, Powell Co., gravel crushing plant
Zook Brothers, Powell Co., asphalt hot mix plant
Exxon, East of Billings, stack extension for F-2, crude furnace economizer
Mont. Sulphur & Chemical Co., East of Billings, smokestack
Conoco, Billings, stack height extensions, boilers No. 6, 5, 1 and 2
Cenex, So. of Laurel, additional asphalt road oil loading heater
Wickens, Hill Co., hot mix asphalt plant
Wickens, Valley Co., portable gravel crushing plant
Wickens, Valley Co., portable gravel crushing plant
Wickens, Valley Co., portable gravel crushing plant
Eastmont Forest Products, Ashland, wood waste fired furnace
Cenex, So. of Laurel, FCC electric gas compressors
Cenex, So. of Laurel, replace refinery flare
Anaconda Co., Anaconda, new stack installation, expansion of acid plant
Zook Brothers, Great Falls, conditions for source testing
Phillips Petroleum, Great Falls, hydrodesulfurization unit

b. Operating Permits - None

c. Tax Credits

Great Western Sugar Company submitted an application for tax credit for their gas cleaning system.

4. Variance Status:

a. Current

The SO₂ variance for The Anaconda Company was renewed at the January 21 Board meeting and expired June 30, 1977. A request for renewal was received and is scheduled for the December Board meeting.

Anaconda's application for a variance from the visibility rule for the smelter has not been scheduled.

Anaconda Aluminum, Columbia Falls, F⁻ and particulate expires June 30, 1978.

b. New - None

5. Enforcement Actions:

a. Citations

Enforcement conference was held with Evans Products, Missoula, prior to issuing a Notice of Violation and Order.

b. Notice of Violation - None

c. Order for Corrective Action - None

Court Actions - None

6. Tepee Burner and Open Burning:

A visit to Spring Creek Forest Products in Judith Gap revealed that the tepee burner is about 90% complete.

Tepee Burner Status:

No. at start	39
New starts	0
Shutdowns	0
No. at end	39

Open Burning: No. of permits issued

Kalispell Office	101	Sanders County	28
Cascade County	6	Yellowstone County	27
Lake County	48	Rest of State	459
Missoula County	36	Total	705

7. Source Tests Performed:

- a. Agency Source Tests - None
- b. Non-Agency Source Tests

Hoerner-Waldorf, Missoula, 21 particulate tests on recovery boilers,
lime kilns, smelt tanks and hogged fuel boiler

8. Field Investigations:

Spring Creek Forest Products, Judith Gap, tepee burner is 90% complete
Louisiana Pacific, Columbia Falls, documentation, tepee burner - in compliance
Equity Supply #2, Kalispell, documentation, in compliance
Bronson residence, Evergreen, requested opening burning permit for
burning insulation off wire, denied
Plum Creek #1, Columbia Falls, documentation
Stoltze Land & Lumber, Columbia Falls, conference regarding startup
Superior Building, Columbia Falls, documentation of teepee burner
Montana Lumber & Plywood, Kalispell, conference regarding application for
new fuel cell operation
C & C Plywood, Kalispell, conference regarding application for new fuel
cell operation
U. S. Park Service, West Glacier, conference regarding new sites for
fluoride sample collections
Superior Building, Columbia Falls, conference regarding startup time
Plum Creek #1, Columbia Falls, conference regarding startup time allowed
LL Cedar, Troy, restrictions regarding warmup fires
Mr. and Mrs. Lee, Bigfork, investigation of possible CO poisoning, referred
to Occupational Health Bureau
Louisiana Pacific, Columbia Falls, documentation, violation corrected
Stoltze Land & Lumber, Columbia Falls, documentation, no violation, startup
ASARCO, Inc., East Helena, restarted acid plant
Brand S, Livingston, smoke and fallout from tepee burner, investigated
Warm Springs Road, Alhambra, fugitive dust, excessive emissions, investigation
Yellowstone Pine, Livingston, tepee burner, routine inspection

9. Complaints:

Warm Springs Creek Road, Clancy, road dust, inspection
Gilman Excavating, Butte, dust, investigation
Mr. Hogge, Helena, road dust, investigation
Brand S Lumber, Livingston, smoke and fallout, meeting with complainant
Individual, Kalispell, odor in trailerhouse, referred to county sanitarian
Deputy County Attorney, Flathead County, smoking in public guildings,
referred to Occupational Health Bureau
Applegate Drive Road, excessive dust, investigation pending

10. Data Processing Services:

- a. Ambient Data Summary - see attached

b. Emission Inventory Status:

No updates received. Semi-annual report sent to EPA, Denver.

c. Prevention of Significant Deterioration

No significant activity.

d. Modeling

No significant activity

11. Environmental Impact Statements:

a. Agency Impact Determinations:

Colstrip EIS addendum comments received.

Air quality sections of draft EIS on ASARCO-Troy project sent to State Lands.

b. Other Agency EIS' reviewed:

Reviewed draft EIS by Glacier Park on fire management

12. Status of Studies, Contracts, and Reports

Upper Flathead Study, finalized first-year design

Rockwell International, contract to evaluate Anaconda's in-stack instruments not yet finalized

MAPS--Missoula ambient station (Lions Park) installed; analyzers calibrated
Rockwell International sent representative to instruct in the operation of data acquisition system.

Butte TSP, proposed program being reviewed

Missoula TSP, local air quality control board meeting held to formally adopt proposed control measures

Billings CO and TSP, citizens committee created to make recommendations on control measures

Billings SO₂, Stipulation agreed to by State Board of Health

13. Schools and Training:

None in November

14. Public Hearings and Meetings:

A. Public hearings held - none in November

B. Meetings Attended:

Anaconda Company personnel, regarding SO₂ variance, penalty for violation of 1974 stipulation

b. Meetings Attended, Cont.

Evans Products, Missoula, enforcement conference
Cenex personnel, discuss conditions attached to construction permit
for sulfur plant
Met with various personnel on MAPS emission inventory
Various state agencies, Upper Flathead River Basin Study
Met with state official regarding building modifications
Met with computer systems personnel on data acquisition system
U. S. Forest Service, Helena, Anaconda Aluminum emission data
Anaconda Company, Butte, stipulation
Cenex, stack height proposals
Air Shed coordinators and forest organizations on proposed changes to
smoke management plan
EPA, Helena
Montana Power, Denver, Colstrip 3 & 4
Montana Power, Helena, Colstrip 3 & 4
State Lands, Helena, air quality impacts of construction of a bentonite
plant at Malta - joint PER to be issued
Highway Department, Helena
Citizen program meeting, Billings, on CO and TSP
Local government people, Butte
Billings TAC in Billings
Department of Natural Resources, Helena, resource plan

c. Intra-staff meetings

Several staff meetings, Air Quality Bureau

15. Public Information Requests:

Rules and Regulations	12
Clean Air Act	9
General Information	6
Open Burning Regulations	12

16. N.A.

17. Other:

Trip was made to Billings to close office. The purpose was to return
state equipment to Helena office and return library documents.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

October, 1977

page 1 of 2

Pollutant: Misc. Indicators

Units:

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days of Data	
144	FLUORIDE PLATES DeHobbes Alt Box Flat head Co. Anaconda South Flathead Co. Glacier Park #1 Glac. Nat. Park Glacier Park #2 Glac Nat Park Glacier Park #9 Glac Nat Park	10/29 mg/m ³	17.610 mg/m ³	1.610 mg/m ³	0.746 mg/m ³	10	
144	FLUORIDE PLATES Anaconda South Flathead Co. Trotter-NAC Flathead Co. Glacier Park #1 Glac Nat Park Glacier Park #2 Glac Nat Park Glacier Park #9 Glac Nat Park	10/29 mg/m ³	17.610 mg/m ³	1.610 mg/m ³	0.746 mg/m ³	10	

Pollutant: Misc. Polluter Data

Units: ppm

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days of Data	
140	Sulfur Dioxide Lockwood School Billings Scobey Daniels Co. Fort Peck McGone Co. Lane Deer Rosedale Co. RM Site Colstrip Nitrogen Dioxide Scobey Daniels Co. Fort Peck McGone Co. Lane Deer Rosedale Co. RM Site Colstrip	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	10	

Pollutant: Misc. Indicators

Units

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days of Data	
141	Overfall - tons/sq mi. Mountain States Great Falls Fire Sta. #1 Great Falls Fair grounds Great Falls Sulfation Rate-mg/sq cm	43.33 lb/sq mi.	48.15 lb/sq mi.	48.15 lb/sq mi.	24.29 lb/sq mi.	10	
140	3/8 mi NE Coop Billings East of Laurel Billings Hi-Ball Trucking Billings Stock Car Track Great Falls Phillips Ref N1 Great Falls Phillips Ref E Great Falls Microwave F. Helena Hi Way Jct. Anaconda C-Hill Anaconda 212 E. Pacific F. Helena East Sta. F. Helena	1.400 lb/sq mi.	4.380 lb/sq mi.	4.800 lb/sq mi.	2.077 lb/sq mi.	9	

Pollutant: TSP

Units: ug/cu meter

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days of Data	
140	Morton-Decker Big Horn Co. Warren Ranch Big Horn Co. Lockwood School Billings Billings City Hall Billings Grand Ave. Sch. Billings Laurel Jr. High Laurel Hospital Roof Great Falls Fire Sta. #1 Great Falls 10th Ave. So. Great Falls Hiway Jct. Anaconda Kinley Reg. Granite Co. Trevelly School Butte Milan Constr. Butte	89 ug/cu meter	148 ug/cu meter	148 ug/cu meter	49.6 ug/cu meter	10	

* site no longer submitting data

*** data unavailable at time of report

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
MONTHLY SUMMARY OF AIR QUALITY DATA

page 2 of 2

Pollutant: TSP

Units: ug/cu meter

AREA		HIGH READING			ARITHMETIC AVER.			Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data		
142	Atkins Res.	60	130	130	47.9	9		
	Waltersville							
	Richer Res.	43	49	49	23.2	9		
	S11. Row Co.							
	Tieney Res.	89	89	89	38.0	10		
	S11. Row Co.							
	Microwave	42	103	103	27.2	10		
	Jefferson Co.							
	212 E. Pacific	156	156	187	71.7	10	1exc Fed. Sec St	
	Lewis & Clark Co.						2exc MT Pr. Std	
143	Kober Res	266	309	309	111.7	6		
	Three Forks							
	Ekalaka							
	Carter Co.							
	Littlefield Hill	30	45	45	20.8	10		
	Miles City							
	Clendive	42	102	102	25.3	10		
	Dawson Co.							
	Lane Deer	21	243	243	26.8	6		
	Rosebud Co.	53	91	91	29.0	10		
Fort Peck								
McDermott Co.	35	275	275	26.3	10			
Broadus								
Powder Riv. Co.								
BN Site								
Colstrip								
Border Site								
Scobey	36	107	107	33.1	8			

* site no longer in operation

*** data unavailable at time of report

Pollutant: TSP

Units: ug/cu meter

AREA		HIGH READING			ARITHMETIC AVER.			
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Days of Data	Comments	
140	Underhill Col Falls Courthouse Missoula JB Field Missoula Co. Kallispell Flathead Co. Troy-Town Lincoln Co. Troy-Sampson Lincoln Co. Hoerner-Wald #1 Missoula Co. Hoerner-Wald #2 Missoula Co. Hoerner-Wald #3 Missoula Co. Court House Lawn Missoula Brown Res. Libby	467 235 169 77 105 22 69 255 255 279 191	467 295 180 226 171 171 255 255 279 191	467 342 214 226 171 171 255 255 279 191	119.0 94.5 54.2 83.1 58.4 40.6 37.1 39.3 28.4 75.0 108.7	10 10 10 10 7 7 4 3 3 3	 1exc Fed Pr. Std 2exc MT Pr. Std 1exc Fed. Pr. Std 2exc MT Pr. Std 1exc Fed. Pr. Std 2exc MT Pr. Std 1exc Fed. Pr. Std 2exc MT Pr. Std 1exc Fed. Pr. Std 2exc MT Pr. Std 1exc Fed. Pr. Std 2exc MT Pr. Std	

Pollutant: Misc. Cont. Data

Units

AQCR	AREA	HIGH READING			ARITHMETIC AVER.		Comments
	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
140	<u>Carbon Monoxide</u> 27th & Montana Billings	15.30	15.30	16.00	2.222	10	1exc Nat 8hr Std
141	10th Ave So. Great Falls	15.30	15.30	15.30	2.227	4	1exc Nat 8hr Std
142	Alpine West Butte	14.0	14.0	14.0	0.596	5	
144	Wallington Jct. Missoula	23.30	23.20	23.30	5.288	9	36exc Nat. 8hr.
140	<u>Hydrocarbons</u> 27th & Montana Billings	26.40	26.40	26.40	2.858	10	
143	<u>Nitric Oxide</u> BN Site Colstrip			***			
140	<u>Nitrogen Dioxide</u> 27th & Montana Billings			***			
142	Alpine West Butte			***			
143	BN Site Colstrip			***			
143	<u>Oxides of Nitrogen</u> BN Site Colstrip			***			

** equipment malfunction - no data

Pollutant: Misc. Cont. Data

Units:

AREA		HIGH READING			ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
140	Ozone 27th & Montana Billings	0.04	0.08	0.08	0.019	10	
142	Alpine West Butte	0.12	0.15	0.15	0.046	4	70exc Nat Std.
140	Sulfur Dioxide 27th & Montana Billings	0.03	0.20	0.20	0.002	10	
142	Laurel Farm Billings	0.52	0.63	0.74	0.050	10	1exc Fed 24hr S 3exc MT 24hr St
140	East Stack E. Helena	0.66	0.66	0.66	0.10	10	1exc MT 1hr Std 1exc MT 24hr St 3exc MT 1hr Std 2exc FED 24hr S 3exc FED 3hr St 12exc Fed 1hr S
142	Microwave E. Helena C-Hill	0.78	1.40	1.40	0.011	10	
140	Anaconda MI-Way Jct. Anacoda	1.92	3.51	3.51	0.024	10	
143	Post Office Anacoda BN Site Colstrip	1.84 0.57	1.84 1.05	1.84 1.05	0.030 0.012	10	

** data unavailable at time of report

